**Amendments to the Claims:**

This listing of the claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

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Claim 1 (previously presented): A semiconductor device comprising:

a semiconductor substrate of a first conductivity type;

a first region of a second conductivity type formed on and in direct contact with said semiconductor substrate;

a second region of the second conductivity type formed at and near the surface of said first region;

figs. 14, 15

a third region of the first conductivity type formed at and near the surface of said first region, and surrounding said second region;

a first electrode portion formed on the surface of said third region located between said first and second regions with an insulating film therebetween;

a second electrode portion connected to said second region;

a third electrode portion connected to said first region and spaced by a distance from said third region; and

a fourth region of the first conductivity type formed at and near the surface of said first region between said third electrode portion and said third region;

112 1st

wherein, a position of an interface between the first region and the fourth region in a depth direction changes for any cross sections crossing a region in which the interface exists along a direction of flow of the current, and the position of the interface in the depth

112 1st direction also changes for any cross sections crossing the region along a direction substantially orthogonal to the direction of the current flow.

Claim 2 (currently amended): ~~The~~ A semiconductor device ~~according to claim 1,~~ ~~further~~ comprising:

a semiconductor substrate of a first conductivity type;

fig. 30 a first region of a second conductivity type formed on and in direct contact with said semiconductor substrate;

D1 a second region of the second conductivity type formed at and near the surface of said first region;

a third region of the first conductivity type formed at and near the surface of said first region, and surrounding said second region;

a first electrode portion formed on the surface of said third region located between said first and second regions with an insulating film therebetween;

a second electrode portion connected to said second region;

a third electrode portion spaced by a distance from said third region;

a fourth region of the first conductivity type formed at and near the surface of said first region between said third electrode portion and said third region; and

a fifth region of the first conductivity type surrounding said third electrode portion, and formed at and near the surface of said first region,

wherein said third electrode portion is connected to said fifth region, and

112 1st wherein a position of an interface between the first region and the fourth region in a depth direction changes for any cross sections crossing a region in which the interface exists along a direction of flow of the current, and the position of the interface in the depth

112 1st <u>direction also changes for any cross sections crossing the region along a direction substantially orthogonal to the direction of the current flow</u>.

fig. 22 Claim 3 (original): The semiconductor device according to claim 1, wherein said fourth region is fixed to a constant potential.

Claim 4 (currently amended): The semiconductor device according to claim 3, wherein

said fourth region is electrically connected to ~~said first electrode portion or~~ said second electrode portion.

Claim 5 (currently amended): The semiconductor device according to claim 1,

112 1st wherein ~~said fourth region~~ <u>the semiconductor device</u> comprises a plurality of ~~discretely formed neighboring~~ <u>said fourth</u> regions, and

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~~the neighboring~~ <u>said plurality of</u> fourth regions are spaced from each other by a distance allowing connection between depletion layers extending from ~~the~~ neighboring <u>said</u> fourth regions, respectively, in ~~the~~ <u>an</u> on state.

Claim 6 (previously presented): The semiconductor device according to claim 5, wherein

assuming that said first region has an impurity concentration of $N_A$, said fourth region has an impurity concentration of $N_D$, the neighboring fourth regions are spaced by a distance of W, a required breakdown voltage is V, an amount of charges is q, a dielectric constant of the vacuum is ε, a relative dielectric constant of silicon is ε', and the impurity concentration $N_A$ is sufficiently larger than the impurity concentration $N_D$, and is substantially infinite, the following formulas are satisfied:

$V > qN_DW^2/(8\varepsilon\varepsilon')$

$W < 2(2V\varepsilon\varepsilon'/(qN_D))^{(1/2)}$.

Claim 7 (original): A semiconductor device comprising:

a semiconductor substrate of a first conductivity type;

a first region of a second conductivity type formed on and in direct contact with said semiconductor substrate;

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a second region of the second conductivity type formed at and near the surface of said first region;

a third region of said first conductivity type formed at and near the surface of said first region, and surrounding said second region;

a first electrode portion connected to said third region;

a second electrode portion connected to said second region;

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a third electrode portion spaced from said third region by a distance, and connected to said first region; and

a fourth region of the first conductivity type formed at and near the surface of said first region between said third electrode portion and said third region;

said fourth region having a depth changing as a position moves in a direction crossing a direction of flow of the current.

Claim 8 (original): The semiconductor device according to claim 7, wherein

said fourth region is fixed to a constant potential.

Claim 9 (currently amended): The semiconductor device according to claim 8, wherein

said fourth region is electrically connected to said first electrode portion ~~or said second electrode portion~~.

Claim 10 (currently amended): The semiconductor device according to claim 7, wherein

said fourth region comprises a plurality of discretely formed regions, and the neighboring fourth regions are spaced from each other by a distance allowing connection ~~connection~~ between depletion layers extending from the neighboring fourth regions, respectively, in an on state.

Claim 11 (previously presented): The semiconductor device according to claim 10, wherein

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assuming that said first region has an impurity concentration of $N_A$, said fourth region has an impurity concentration of $N_D$, the neighboring fourth regions are spaced by a distance of W, a required breakdown voltage is V, an amount of charges is q, a dielectric constant of the vacuum is ε, a relative dielectric constant of silicon is ε', and the impurity concentration $N_A$ is sufficiently larger than the impurity concentration $N_D$, and is substantially infinite, the following formulas are satisfied:

$V > qN_DW^2/(8\varepsilon\varepsilon')$

$W < 2(2V\varepsilon\varepsilon'/(qN_D))^{(1/2)}$.

Claim 12 (previously presented): The semiconductor device of claim 1, wherein the fourth region is a continuous region having changing depths in a direction crossing a direction of current flow.

figs. 14, 15

Claim 13 (previously presented): The semiconductor device of claim 7, wherein the fourth region is a continuous region having changing depths in a direction crossing a direction of current flow.

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Claim 14 (new): The semiconductor device according to claim 1, wherein the first region is configured to have a region that is not depleted by a depletion layer extending from the fourth region in an on state.